## **CERES Requirements Log - Clouds**

| Reqm'ts<br>No. | Requirement   | SCCR | Provider | Responsible<br>Subsystem | Responsible<br>Person | How was it conveyed?                  | When was it received? | When was it accepted? | When was it completed? | Current Status   |
|----------------|---|------|----------|--------------------------|-----------------------|---------------------------------------|-----------------------|-----------------------|------------------------|--|
| 4-1            | Update Terra Main Processor for MODIS<br>Collection 5 and handle Edition 3 changes        | 603  | Geier    | Clouds/<br>Convolution   | Sun-Mack              | Email, phone,<br>and face-to-<br>face | 04/20/05              | 04/20/05              |                        | The delivery for Terra only will not be necessary. We have integrated the changes for Edition3 into this requirement.  |
| 4-1.1          | Integrate updated CERES cloud mask code   | 603  | Minnis   | Clouds                   | Sun-Mack              | Email                                 | 04/20/05              | 04/20/05              |                        | Waiting science code changes (Minnis approval).  |
| 4-1.2          | Update MOD04 read software to handle rename SDS and change in dimensions for Collection 5 | 603  | Geier    | Clouds                   | Sun-Mack              | Email                                 | 08/24/05              | 08/24/05              |                        | MOD04 file format reviewed. Test files have been read.   |
| 4-1.3          | Update cloud algorithms to be similar to Aqua production code                             | 603  | Minnis   | Clouds                   | Sun-Mack              | Meeting on<br>production<br>schedule  | 08/11/05              | 08/11/05              |                        | The Terra version of the code has been frozen in production while updates were allowed in the Aqua version. Compatibility was maintained for both satellite in latter versions. The Aqua version will be used as baseline for Edition 3 updates. |
| 4-1.4          | Update convolution code to match Aqua production code                                     | 603  | Geier    | Convolution              | Miller                | Meeting on<br>production<br>schedule  | 08/11/05              | 08/11/05              |                        | The Terra version of the code has been frozen in production while updates were allowed in the Aqua version. Compatibility was maintained for both satellite in latter versions. The Aqua version will be used as baseline for Edition 3 updates. |
| 4-1.5          | Write and implement the initial MCRS-IR Algorithm to retrieval cloud properties           | 603  | Minnis   | Clouds                   | Sun-Mack              | Email and face<br>to-face             | 06/15/05              | 06/15/05              |                        | Need to validate.  |
| 4-1.6          | Write a 250 meter MODIS read software to retrieve visible radiances                       | 603  | Minnis   | Clouds                   | Sun-Mack              | Email                                 | 11/15/05              | 11/15/05              | 04/15/06               | Completed.   |
| 4-1.7          | With 250 meter reader, write software to implement Partial Cloudy Algorithm               | 603  | Minnis   | Clouds                   | Sun-Mack              | Email and meeting.                    | 11/15/05              | 11/15/05              |                        | Initial results looks good for certain types of clouds and not so good for ice cloud. Need to design a strategy when and where to apply the algorithm.   |
| 4.1-8          | Implement the latest CO2 Slicing Algorithm from MODIS team.                               | 603  | Minnis   | Clouds                   | Sun-Mack              | Email                                 | 01/26/06              | 01/26/06              | 05/30/06               | Overall, results look good. Need to find out the cause of stripping over high elevation.   |

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|----------------|---|------|----------|--------------------------|-----------------------|---|-----------------------|-----------------------|------------------------|------------------------------|
|                | Implement the CO2 Slicing Multilayer<br>Detection Algorithm | 603  | Minnis   | Clouds                   | Sun-Mack              | Email, face-to-<br>face, phone,<br>meeting. | 02/22/06              | 02/22/06              |                        | Need to validate.            |
| 4.1-10         | Correct missing imager data algorithm                       | 603  | Geier    | Convolution              | Miller                | Email                                       | 04/27/06              | 04/27/06              |                        |                              |
| 4.1-11         | Update SSF structure as proposed                            | 603  | Geier    | Convolution              | Miller                | Meeting and<br>Emails                       | 05/30/06              | 05/30/06              |                        |                              |
| 4.1-12         | Convolve imager information for new parameters              | 603  | Geier    | Convolution              | Miller                | Meeting on production schedule              | 05/30/06              | 06/05/06              |                        |                              |
| 1 4-2          | Modify PCF Generator Script for FM4<br>Ed2-NoSW             | 609  | Geier    | Clouds/<br>Convolution   | Miller                | Email                                       | 12/12/05              | 01/09/06              | 01/20/06               | Delivered. Promoted 2/16/06. |